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Executive summary

On 20 March 2020, UK schools closed their gates to all but the children of essential workers and those deemed most vulnerable. As of 15 May, this remained the case; should the progress of the pandemic permit, some more children might be allowed to return at the start of June.

School closures have presented a huge challenge to both children and their parents. They are also a big concern for policymakers for many reasons, not least because months out of school risk setting back children's learning and development. This is particularly concerning for children from disadvantaged backgrounds, who already achieve less well on average than their better-off classmates.

The transition to home learning will be a disruption for virtually every child in England. However, the extent to which it is a *harmful* one will depend on how home learning is implemented in each school and in each family. For policymakers seeking to balance the public health benefits of the lockdown with the economic and educational costs of school closures (which in turn will have consequences for health), it is essential to understand what home learning during lockdown looks like across the country.

In this report, we present initial evidence on how children are spending their time during the lockdown, with a focus on home learning activities and the home learning resources available in different families. This evidence is based on a new survey, specially designed by researchers at IFS and the Institute of Education (IoE). The survey was completed online by over 4,000 parents of children aged 4–15 between Wednesday 29 April and Tuesday 12 May 2020.

Key findings

Primary and secondary students are each spending about 5 hours a day on average on home learning. However, secondary school children are more likely to have online classes and to spend their leisure time online.

Higher-income parents are much more likely than the less well-off to report that their child's school provides online classes and access to online videoconferencing with teachers. 64% of secondary pupils in state schools from the richest households are being offered active help from schools, such as online teaching, compared with 47% from the poorest fifth of families. 82% of secondary school pupils attending private school are offered active help, with 79% being provided with online classes.

Children from better-off families are spending 30% more time on home learning than are those from poorer families. Children in the highest-income fifth of families spend 5.8 hours a day on educational activities, over 75 minutes more than their peers in the poorest fifth of households (4.5 hours). Over the 34 days (minimum) that schools will be closed, students in the best-off families will have done more than 7 full school days' worth of extra learning time. If schools do not go back until September and current rates of home learning continue, the gap would double to 15 full school days. This could have very substantial long-term consequences in light of evidence that even one extra hour a *week* of instructional time can significantly raise achievement.

Better-off students have access to more resources for home learning. Within state primary and secondary schools, parents in the richest families are around 15 percentage points more likely than those in the poorest fifth to report that their child's school offers active resources such as online classes, or video or text chatting. More than half (58%) of primary school students from the least well-off families do not have access to their own study space.

Many parents of both primary and secondary school students report struggling with supporting home learning. Almost 60% of the parents of primary school children and nearly half of the parents of secondary school children report that they are finding it quite or very hard to support their children's learning at home.

School closures are almost certain to increase educational inequalities. Pupils from better-off families are spending longer on home learning; they have access to more individualised resources such as private tutoring or chats with teachers; they have a better home set-up for distance learning; and their parents report feeling more able to support them. Policymakers should already be thinking about how to address the gaps in education that the crisis is widening.

Whatever strategy the government pursues for reopening schools, there is a risk that it will increase inequalities. Fewer than half of parents say they would send their child back to school if they had the choice. Higher-income parents report being more willing for their child to go back to school. This risks a situation where the children struggling the most to cope with home learning remain at home while their better-off classmates are back in the classroom.

1. Introduction

The crisis has upended many aspects of 'normal' life for children at once; previous research found that 8- to 16-year-olds spent on average 30 hours a week at school (during term-time), and another 22 hours a week outside their homes.[1] Not only are most now spending all this time at home, but the support that their teachers and their parents provide will have changed significantly over the past two months.

These changes in the context in which learning takes place are likely to have significant effects both on how children perform in school *on average* and on inequalities in educational attainment. The COVID-19 pandemic is pushing to the forefront the long-standing issue of the gap in educational achievement between children from disadvantaged backgrounds and their classmates from better-off homes. It is raising urgent questions such as 'How will inequalities in children's access to study spaces and technology affect their ability to learn from their homes?' and 'Will parents with lower qualifications be able to support their child's learning as effectively as those with better qualifications?'.

In the face of these questions, policymakers and schools face difficult choices. We might wish to offer as many resources as possible to children to help them make the most of their time at home. But might this widen the gaps between families who have the time and resources to make full use of them, and those who don't?

To help answer some of these questions, researchers from the Institute for Fiscal Studies (IFS) and the Institute of Education (IoE), with funding from the Nuffield Foundation, have surveyed families with children, asking parents about how they and their children are spending their time during lockdown, and what resources they have available for home learning. Box 1 describes the survey data that we have collected.

In this report, we summarise the initial evidence on how children were using their time at the end of April and early May (between six and eight weeks after schools closed, and after the Easter holidays had ended) and the resources available to children to support their learning. These statistics provide a clear, real-time picture of children's experiences of home learning during the lockdown and how these differ between children from different socio-economic backgrounds.

Some of our findings highlight areas of real concern. Children from more disadvantaged families are spending less time on home learning; they are making do with fewer resources both from their schools and in their own homes; and the activities they are doing are less likely to benefit their educational attainment.

[1] S. Cattan, C. Farquharson, S. Krutikova, A. Phimister, and A. Sevilla, 'Trying times: how might the lockdown change time use in families?', IFS Briefing Note BN284, 2020, https://www.ifs.org.uk/publications/14814.

Box 1. IFS–IoE survey of families' time use

Sample: Between 29 April and 12 May 2020, researchers from IFS and the IoE surveyed 4,157 parents online in England with children in eight different school years aged between 4 and 15.[a] We ensured that respondents were diverse in terms of their gender, education, region, marital status and work status. We then reweighted our data to ensure that our statistics are representative of parents and children in England as a whole (see the appendix for details).

Data collected: The main feature of our survey is detailed information on how families and children spend their time on a term-time weekday. We asked the surveyed parent (and their partner, if they had one) to fill in an online time-use diary, telling us what activities they did during each hour of the day. We also had the parent fill in a similar diary about their child's time use (selecting just one child in multi-child families), and asked who the child was with during each time slot. Finally, we collected information about the types of home learning activities children are doing, what resources have been provided by the school and what resources are available at home for learning.

Interpreting time-use data: In order to keep the survey a manageable length for families, we asked about time use in one-hour slots. Since these are wider than the ten-minute intervals used in standard time-use surveys, such as the UK Time Use Survey, we cannot say precisely *how long* parents or children spent on a particular activity; parents could report that their child was doing multiple activities during the hour, so the apparent number of hours might overstate how long the child actually spent on the activities under that category. Instead, we comment on the number of one-hour slots during which parents or children reported doing at least some of a particular activity.

For a selected set of educational activities, we also collected data on the total *length* of time children spent. These data allow us to complement the time diaries with more nuanced analysis of the amount of time spent on key activities such as home learning. These data are the focus of much of the analysis in this report.

Earnings data: We examine how children's experiences of home learning differ by the economic situation of the households they live in. Our main indicator here is total household annual pre-tax earnings, 'equivalised' to take into account that bigger families need a higher income to enjoy the same standard of living and that adults typically require more resources than children. We divide households into five groups based on this equivalised measure.[b] We focus on equivalised earnings to get the best sense of the resources families have available; however, all the patterns we show in this report hold for other measures of earnings, such as total (non-equivalised) household earnings and earnings of the top earner.

[a] We interviewed parents with children entering Reception next year and those with children in school in Reception and in Years 1, 4, 5, 8, 9 and 10. Our aim was to pick up on children of a range of ages who are likely to have standardised assessments in the next few years.

[b] Earnings per equivalised household member: first adult counts for one member, subsequent adults and children 14 and over for half an equivalent member, younger children for 0.3 of an equivalent member. The groups correspond to the following levels of income per equivalised member: £0 to £2,500 (bottom 20%); £2,501 to £8,334; £8,335 to £16,000; £16,001 to £26,000; and £26,001 and higher (top 20%). Note, however, that because these figures are equivalised, they are not equal to earnings per household member.

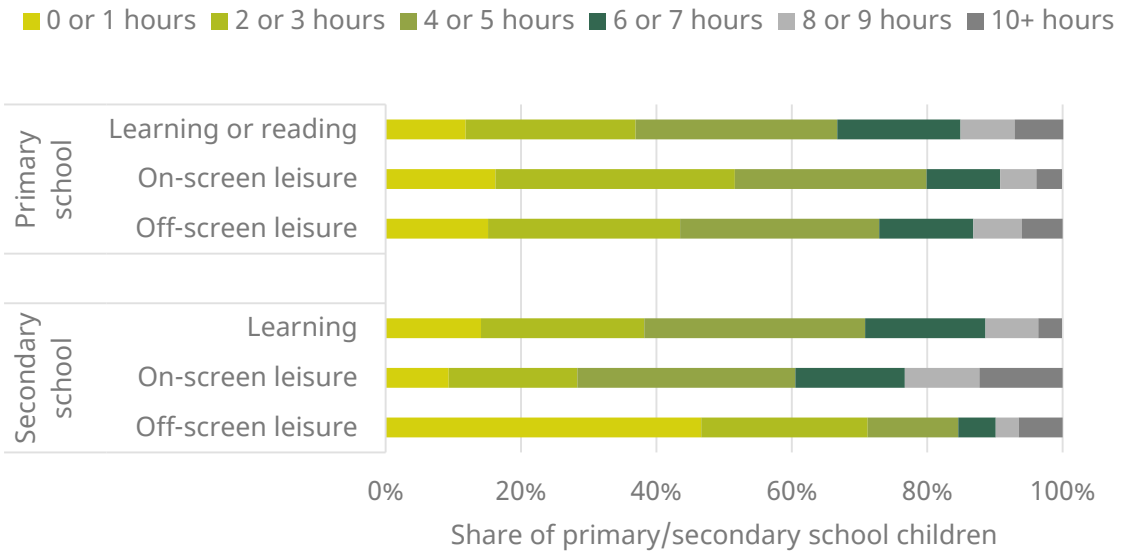
2. How are children spending their time?

In this section, we present initial results on how children (who are not currently attending school) are spending their time during the lockdown. We focus on three activities:

- **Learning at home:** This includes activities such as studying, attending virtual lessons or doing home learning assignments. For children in primary school, it also includes reading.
- **On-screen leisure:** This category focuses on screen time for fun, including watching TV, using social media, browsing the internet or playing computer games.
- **Off-screen leisure:** This category includes activities that children do for fun that do not involve screens. Examples include exercise, off-screen games or hobbies, and – for secondary-school-age children – reading for pleasure.

Importantly, we focus on the number of one-hour slots during which parents reported that their child did at least some of each activity. Summing the number of slots may overstate the amount of time that children spent on that activity (for example, a child who read for half an hour at 10am and at 3pm would record doing reading in two of the one-hour slots). However, time-use diary data do allow us to capture the extent to which children (and parents) are multitasking during the day, and provide a better sense of whether children are working in short focused blocks or engaging with an activity for most of the day (albeit perhaps in a less intensive way).

Figure 1. Children's daily time use during lockdown



Note: Chart shows the number of one-hour time slots in which parents report their child doing at least some of each activity. The primary school sample includes pre-primary children (currently aged 4, entering Reception next year).

Source: Authors' calculations using IFS–IoE survey of families' time use.

Figure 1 shows the number of one-hour slots during which children did at least some learning, on-screen leisure and off-screen leisure activities. We split these data by the child's age, presenting the results separately for those in primary school (including pre-primary children, so covering ages 4–11) and those in secondary school (ages 12–15, or Years 8 through 10).

We find that there are significant differences in how children are spending their time. On average, parents of primary school children report that they are engaged in learning activities (including reading) in just under 5 one-hour slots per day. However, a significant number of children are doing quite a bit more than this: 15% of primary school children did at least some learning activities in 8 or more one-hour slots during their day. By contrast, 12% of children spend little or no time on these activities, either doing them in just 1 one-hour slot or not reporting doing any. Secondary students undertake some learning activities across a similar number of one-hour slots on average, though for this age group learning activities exclude reading for pleasure.

Outside of educational activities, Figure 1 makes it clear that children – especially those in secondary school – are spending quite a bit of leisure time on screens. On average, older children's parents reported that they are using technology for fun in 5.4 one-hour slots; parents of primary school children reported leisure involving technology in 3.8 one-hour slots on average. At the top end, 9% of younger children and 23% of older children engaged in screen time for fun during 8 or more hours of the day.

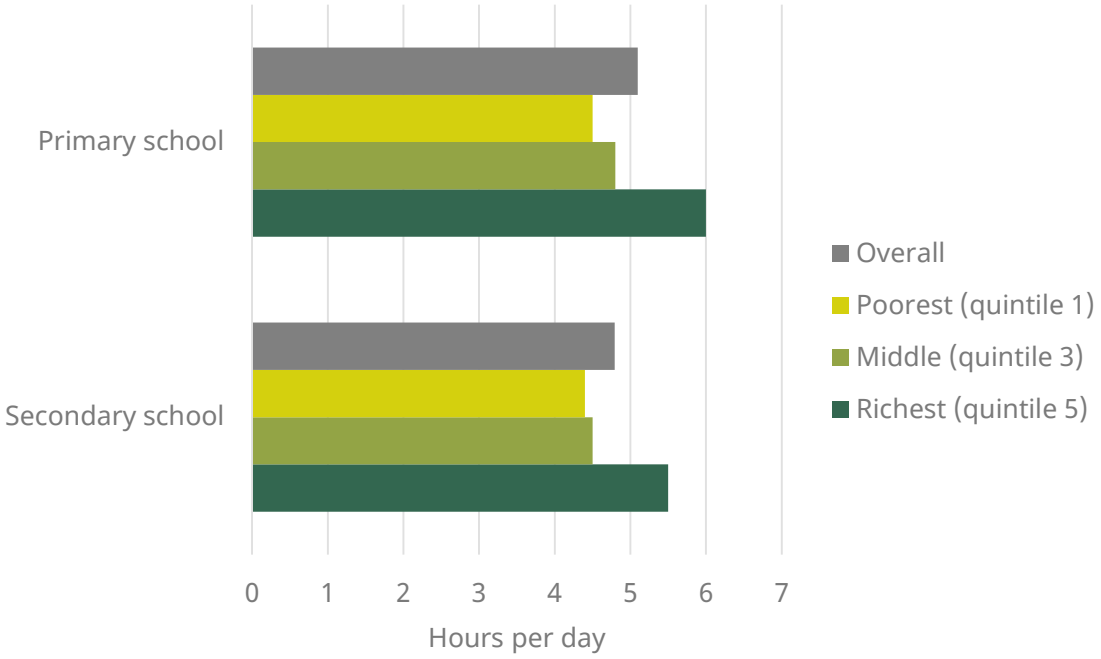
3. Does children's time use differ by their family's income?

Having shown that children are spending their time during lockdown in a wide variety of ways, we now examine how children's time use differs by households' financial resources, focusing on educational activities.

We use annual earned income from before the crisis in order to capture better the longer-term socio-economic differences between households, rather than more recent changes in households' economic circumstances as a result of the pandemic which, hopefully, will prove to be short-lived in most cases. As described in Box 1, we split households into five groups on the basis of their total household earnings (adjusted to account for family size).

To capture educational activities, we use the data we collected on the total amount of time each week that children spent on four educational activities: online classes (provided or suggested by the school); other work assigned by the school; time with a paid private tutor; and time on other educational activities. We add the time spent on these four activities together to arrive at a measure of total time on educational activities, then divide by 5 to arrive at a figure for time per school day.

Figure 2. Children's daily learning time during lockdown: by household income



Note: The primary school sample includes pre-primary children (currently aged 4, entering Reception next year). Families are categorised into five similar-sized groups based on their equivalised income as described in Box 1. Only the top, middle and bottom groups are shown here.

Source: Authors' calculations using IFS–IoE survey of families' time use.

Figure 2 shows that there are big gaps in the total amount of time that children spend on educational activities. Secondary school children from better-off families (those in the top fifth of the distribution of family earnings) spend, on average, 5.5 hours a day on educational activities. This is over 1 hour more a day than the 4.4 hours a day spent by children in the lowest-income fifth of families. This difference adds up to a difference of 5½ hours of learning per school week. The gaps at primary school are even larger, equivalent to 7½ hours per week (around 1½ hours per day). For both primary school and secondary school children, the biggest gaps are between children in the richest 20% of families and the rest of their peers.

Taking primary and secondary schools together, children in the best-off households are spending 5.8 hours a day on learning activities, over 75 minutes more each day than the 4.5 hours that children in the poorest fifth of families are spending on home learning.

If children from better-off families are spending more time on home learning during lockdown, they are likely learning more than their peers in worse-off households. And these differences can compound over time; over the 34 school days between the start of school closures on 23 March and the earliest date that (some) children might return to school (currently 1 June), children in the richest fifth of families might have spent an extra 44 hours on home learning – equivalent to over seven full school days. If children do not go back to school until September, losing another 37 school days in the second half of the summer term, better-off children will have spent 92 hours more on home learning than those from worse-off households.

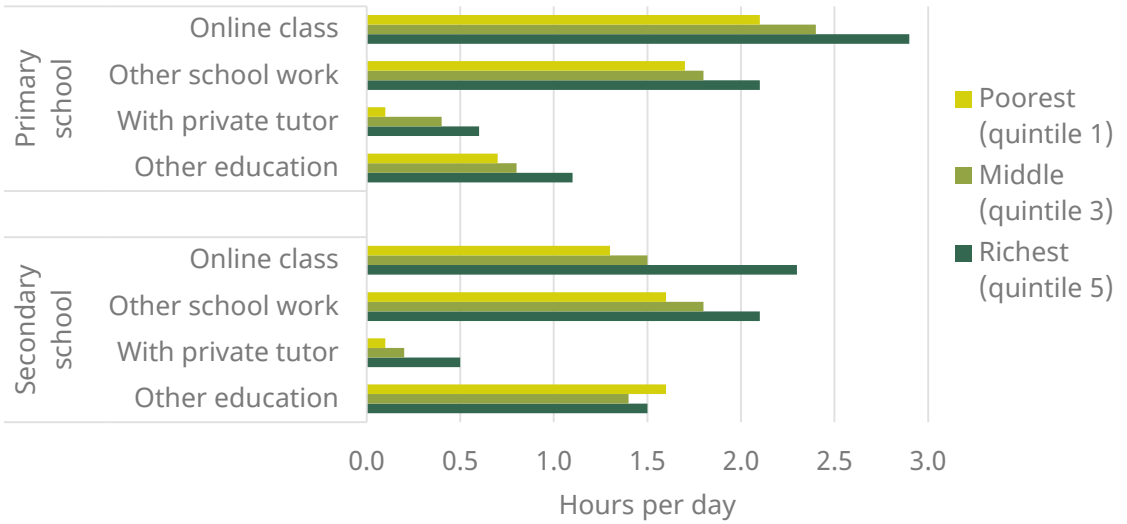
These are meaningful differences – previous research finds that as little as an extra hour of instructional time each week is associated with very substantial increases in test scores over the course of a school year.[2]

Differences between types of educational activities

However, these differences in time spent on learning activities do not give the full picture of how children from lower- and higher-income families are experiencing lockdown. Not all home learning activities are the same; this category includes watching generic YouTube videos of maths lessons, logging on for an hour-long online class run by a child's usual subject teacher and one-to-one lessons with a private tutor. While more research is needed to understand how different types of home learning will affect different types of children, it seems reasonable to assume that some of these activities will be more useful for children's education than others.

[2] V. Lavy, 'Do differences in schools' instruction time explain international achievement gaps? Evidence from developed and developing countries', *Economic Journal*, 2015, 125, F397–424.

Figure 3. Children's daily learning time during lockdown: gaps in educational activities



Note: Chart shows the number of hours per school day, based on reported weekly hours on each activity. The primary school sample includes pre-primary children (currently aged 4, entering Reception next year). Earnings groups constructed as in Figure 2. Note that slight discrepancies in the sum of each category reported here and total time reported in Figure 2 are due to the removal of extreme observations.

Source: Authors' calculations using IFS–IoE survey of families' time use.

Figure 3 therefore shows the four different types of educational activities that underlie our measure of total learning time. Children in better-off families are spending more time on nearly every educational activity than their less well-off peers. The gaps are particularly noticeable for activities provided by schools: children in better-off families spend more time than their less well-off peers in online classes, and they also spend more time on other work assigned by schools. In most cases, these gaps between the top and the bottom of the income distribution are driven mostly by students in the richest families spending considerably longer on educational activities each day.

One of the most striking differences is the gap in time spent with a private tutor. In the poorest fifth of families, only 9% of students have access to a private tutor – half as many as in the highest-income group. And even among those who do receive tutoring, children from richer families receive much more of it. Among children in the poorest families who have a tutor, around two-thirds spend 1–4 hours a week with them. For children in the richest fifth of families with tutors, more than two-thirds of students spend over 5 hours a week – an hour a day – with their tutor. Overall, 12% of secondary school pupils from the richest households are receiving, on average, an hour or more of tutoring each day.

Some of these educational activities, such as tutoring and online classes, are intensive and likely valuable for children's learning. They are also typically less reliant on a parent's help (for example, to explain a maths concept). This means that children from better-off families are not only doing a higher *quantity* of home learning, but also that they have access to potentially higher-*quality* home learning opportunities which may also require less parental support.

4. What resources do children have available for home learning?

Section 3 showed that children from better-off families have been spending much more time on average than their less well-off peers on educational activities each day. These differences will matter even more if they are compounded by differences in access to home learning resources, which facilitate distance learning and so make the time spent on home learning more useful for children's development. We now show evidence of the resources that children have available to support their learning.

How might home learning resources differ?

There are at least three dimensions on which access to home learning resources can differ. First, schools can provide different resources: some schools are delivering a full set of online lessons, while others are relying on home learning packs (which provide information and worksheets for children to work through). Schools have also taken different approaches to the amount of work they are setting, with some aiming to continue making progress on the core curriculum while others aim to preserve a baseline level of skills.

Second, families differ in the type of learning environment they can provide at home. Effective home learning is made much easier by access to suitable technology (to attend online classes or download assignments) and a quiet, dedicated space to study.

Finally, parents differ in how much time and support they can offer their children while they are learning from home. To some extent, this support can be provided by either parents or schools – a videochat with a teacher to ask a maths question might be preferable to asking a parent. But, particularly for younger children, some of the supervision required to make home learning work is more easily done in person.

In this section, we explore inequalities in these three dimensions.

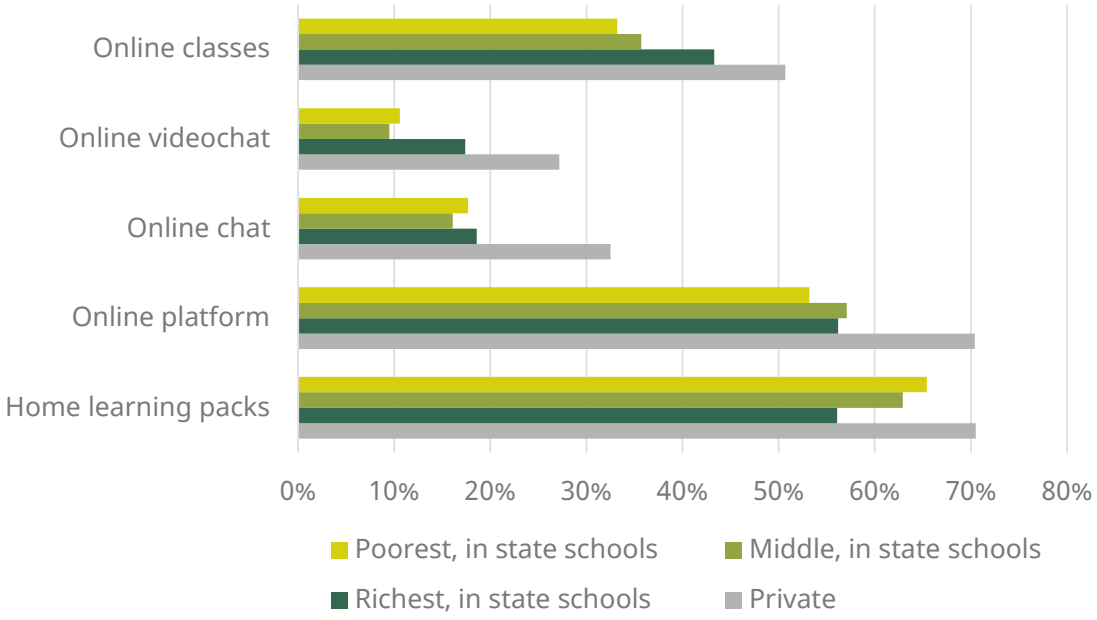
Differences in home learning resources provided by schools

Figure 4 shows the share of parents who report their child's school is providing home learning resources to students. Ongoing surveys of teachers, such as the Teacher Tapp project, have shown that private schools are more likely to offer online classes.[3] Our survey finds similar patterns, with private schools (much) more likely to offer online resources to their students. However, Figure 4 emphasises that there are also inequalities within the state school sector.

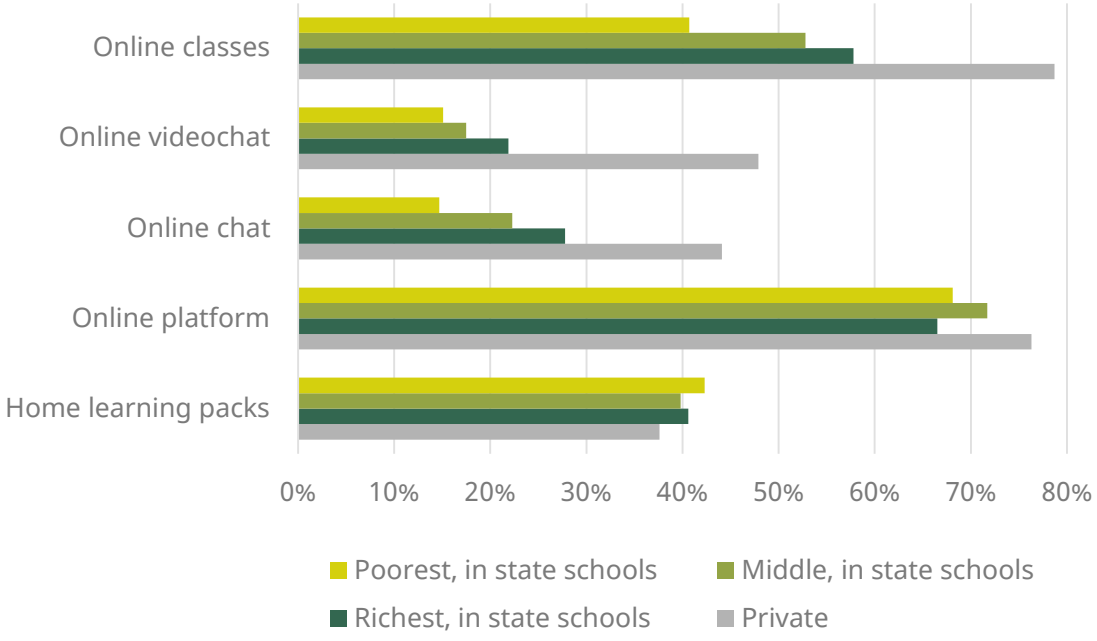
[3] https://teachertapp.co.uk/what-are-teachers-doing-at-home-and-where-are-you-doing-it/.

Figure 4. Share of parents reporting their child's school provides different home learning resources

Panel A. Primary schools



Panel B. Secondary schools



Note: Parents were asked, 'Which of the following activities has [child]'s school provided while schools are closed? Please tick all that apply.' Earnings groups constructed as in Figure 2. The primary school sample includes Reception to Year 5 children (but not pre-primary).

Source: Authors' calculations using IFS–IoE survey of families' time use.

In primary schools (Panel A), a third of parents in the lowest-income fifth of families report that their child's (state) school provides online classes (whether or not the child is able to attend them). Among state school children in the highest-income fifth of families, 43% are being offered online classes by the school.[4] Similarly, state school pupils from better-off families are far more likely to be being offered online videoconferencing with teachers.

In all, 53% of primary school parents in better-off households whose children attend state schools report that their child's school is providing active help (through online classes, videochat or online text-based chatting), compared with 41% of parents in the poorest fifth of households whose child is in a state school.

If anything, these differences are even more significant in secondary school (Panel B). 64% of secondary pupils in state schools from the richest households are offered some form of active help compared with 47% from the poorest fifth of families. Within state secondary schools, access to such help is 13 percentage points more likely for Year 10 pupils (60%), who will sit their GCSEs next year, than for younger years. 82% of secondary school pupils attending private school are offered active help, with 79% being offered online classes.

In part, these inequalities reflect schools' different capabilities; for example, previous research has found that private school teachers are more confident in using education technology,[5] and interactive lessons and engagement are likely to be more feasible with lower pupil-to-teacher ratios. These inequalities may also reflect a conscious decision: schools in more deprived areas might be holding back from adopting online activities in order to limit the effect of inequality in access within the school. Indeed, as we show in the next subsection, students from more disadvantaged households are more likely to lack the tools and quiet learning space that are required for home learning under the current circumstances.

This highlights the difficult balancing act that schools face. The richer the range of resources they provide to students, the more some students will be left out if they lack the resources at home to take full advantage of them. But holding back risks widening gaps between schools. Either way, the most disadvantaged students are likely to be disproportionately hard hit.

Differences in students' home learning set-up

There has been a high-profile discussion about whether all students will be able to access home learning resources. In England, the Department for Education will provide laptops for some disadvantaged Year 10 students who do not already have access to a computer.[6]

Panel A of Figure 5 shows that these sorts of interventions, aimed at increasing children's access to home learning technology, will loosen a real constraint. Among secondary school children, 14% of children in the least well-off families use a phone or have no device

[4] There may, however, be differences in the way parents from different groups interpret what is meant by 'online classes'. Some schools are offering short online catch-ups while others are running full lessons.

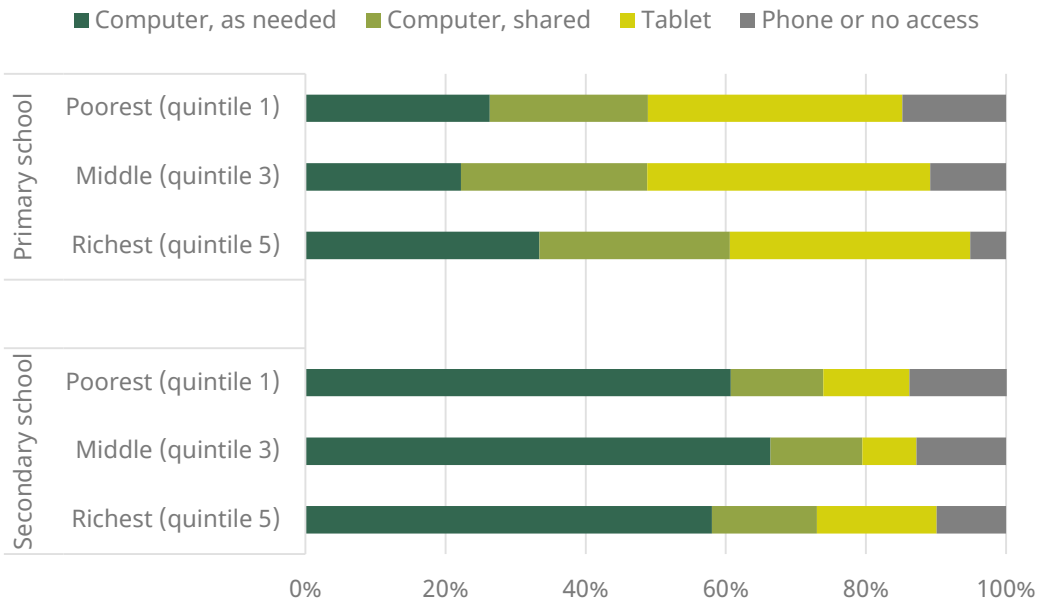
[5] https://teachertapp.co.uk/what-does-distance-learning-look-like-in-england-and-where-will-teachers-kids-be-today/.

[6] https://www.gov.uk/guidance/get-help-with-technology-for-remote-education-during-coronavirus-covid-19#who-can-receive-digital-devices-and-internet-access.

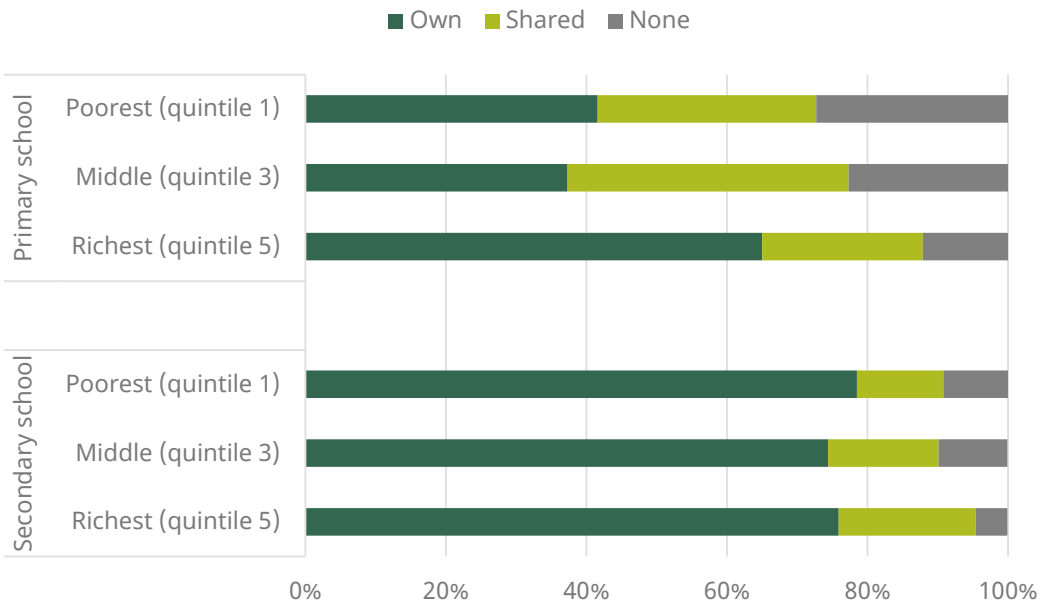
to access schoolwork. This is one area where – perhaps surprisingly – inequalities are not as pronounced, with 10% of secondary students in the highest-income fifth of families also reporting not having access to a computer or tablet for their schoolwork. Since 88% of secondary school students report that their school uses at least one online home learning resource, students without appropriate technology (whether from more or less disadvantaged families) face a real risk of being left behind.

Figure 5. Gaps in educational resources by household income

Panel A. Device used to access schoolwork



Panel B. Has access to a dedicated study space



Note: Parents were asked 'What is the main device that [child] uses to access online resources provided by the school?' and 'Is this device always available for [child's] use?'. Parents were also asked to tick all places that apply when asked 'Does [child] have a desk or dedicated space for studying at home?'. Notes as for Figure 2.

Source: Authors' calculations using IFS–IoE survey of families' time use.

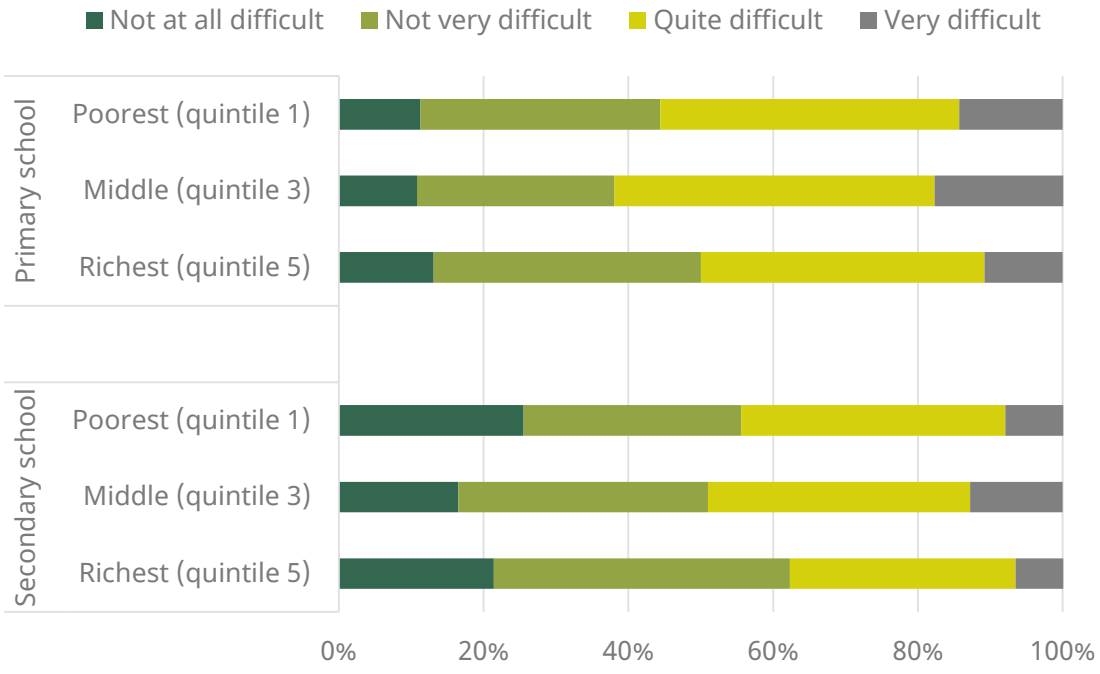
The gaps in access to technology are more pronounced in primary schools, with three times as many of the poorest students using a phone or having no device to access schoolwork, compared with the richest students. However, since computer use is lower in primary schools across the board and since primary schools are less likely to use online resources, these gaps might have less of an impact than they do at secondary school.

But there are even bigger constraints – and even bigger inequalities – in access to study space. Almost 60% of primary school students in the least well-off families do not have access to their own dedicated study space, compared with only 35% in the most well-off families. Among secondary school students, the proportion of those from the lowest-income-group families who have no access to their own or even shared study space is twice as high as that among the highest income group (at 9.2% and 4.5% respectively).

Differences in parents' ability to support home learning

As much of the responsibility for supporting school learning has been transferred from the classroom to the home, parents are being asked to navigate a system of often-unfamiliar learning tools and content. Almost 60% of the parents of primary school children and almost half of the parents of secondary school children report that they are finding it quite or very hard to support their children's learning at home. These difficulties could reflect the parent's own skills or confidence, the type and amount of support provided by the school, or other commitments that parents must balance against home learning.

Figure 6. How difficult are parents finding supporting their child's home learning?



Note: Parents were asked 'How do you find supporting [your child] with home learning while schools are closed?'. Notes as for Figure 2.

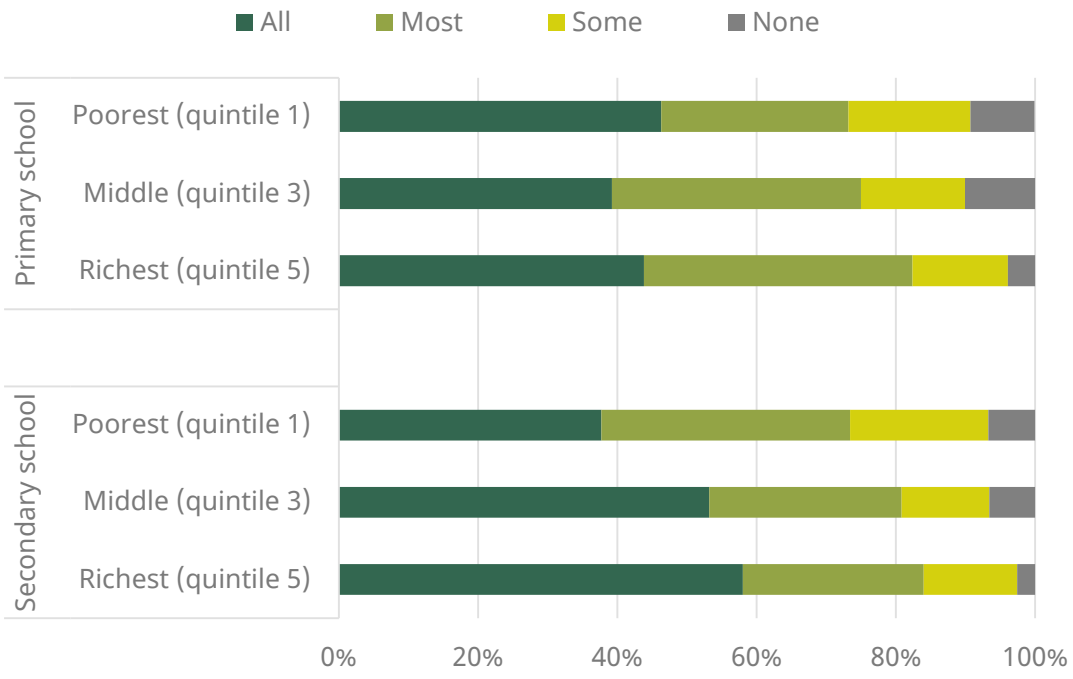
Source: Authors' calculations using IFS–IoE survey of families' time use.

Figure 6 shows that it is the parents in the middle of the income distribution who report struggling the most to support their child's home learning. In primary schools, 62% of parents in the middle of the income distribution report finding it quite or very difficult to support home learning, compared with 56% of parents in the poorest fifth and 50% of those at the top of the income distribution. While we define these income groups based on pre-pandemic earnings, a possible explanation is that parents in the middle of the income distribution are more likely to (both) be working than those in the poorest households, while still not having as many home learning resources as those in the richest. We will explore how parents' time use has changed during the crisis, and what this means for families, in future work.

Differences in children's ability to complete schoolwork

So far in this section, we have focused on three measures of the resources that children have available for home learning: materials provided by their school, resources they have at home and their parents' ability to support their learning.

Figure 7. How much of their assigned schoolwork are children submitting?



Note: Parents were asked 'Is [child] submitting all the required school work?'. Notes as for Figure 2.

Source: Authors' calculations using IFS–IoE survey of families' time use.

One measure that reflects how able children are to fulfil their school's demands is whether or not they are submitting their assigned schoolwork. Encouragingly, Figure 7 shows that most children – three-quarters of those in primary school and four-fifths of those in secondary school – are managing to submit most or all of the work that their school assigns. However, once again inequalities emerge between children from different backgrounds; in secondary schools, 58% of children from better-off families are submitting all of their schoolwork, compared with 38% of children in the lowest-income

fifth of families. This is likely partly to reflect the more challenging conditions that children from poorer families face in finding the resources and support to assist their learning activities during the lockdown, as well as the considerably longer hours that pupils in better-off families are spending on schoolwork.

5. Conclusion and implications for policy

In the past two months of school closures, families in England have undergone a rapid transition to home learning. While school closures have supported the public health efforts to control the spread of COVID-19, they have had – and will continue to have – enormous impacts on children's education. Overall, there is encouraging evidence that children are spending a substantial amount of their day on learning activities. Previously, students spent 6 hours a day at school (including breaks) during the week and additional time on homework; now, they spend an average of 5 hours a day in total on educational activities.

However, the initial statistics presented in this report make it clear that students are facing very different experiences of home learning. Children in better-off families attend schools that are giving them significantly more work to do, often through more interactive platforms such as online videoconferencing. These students are more likely to have access to resources such as study space and technology at home, and their parents report feeling (somewhat) more confident in supporting their learning.

Recommendations for policy

In the coming months, the extent to which these differences feed through into children's academic outcomes will become clearer. But based on the patterns that we document, it is already clear that the COVID-19 crisis is very likely to exacerbate pre-existing inequalities in educational attainment by children's economic backgrounds. Policymakers should prepare now to offset these growing gaps.

In deciding how best to do this, policymakers should draw on all of the evidence that researchers from across disciplines are currently producing. Broadly, policymakers have three different sets of options (not necessarily exclusive):

- making students' experience of home learning more equal;
- bringing students back into schools at different times; and
- offering extra resources and additional support to students to help them catch up once they are back at school.

Of these policy levers, our survey has the least to say about the third. Once students are back in the classroom, the challenge of how to identify and support students who are falling behind looks familiar – institutions such as the Education Endowment Foundation are dedicated to building an evidence base on how to support disadvantaged students' learning. This is no small feat, but researchers and teachers are already putting forward proposals for how the programmes currently in place can be adapted to meet post-pandemic needs. For example, the Sutton Trust recommends small-group tutoring for children who have fallen behind.[7]

[7] C. Cullinane and R. Montacute, 'COVID-19 and Social Mobility Impact Brief #1: school shutdown', 2020, https://www.suttontrust.com/our-research/covid-19-and-social-mobility-impact-brief/.

The findings in this report do, however, have important implications for policymakers seeking to make home learning more equal and for the ongoing debate on how to manage children's return to school.

Making home learning more equal

The government has already taken some positive steps, such as providing free access to online lessons through Oak Academy (though there is some concern about unequal take-up of these) and offering laptop loans to some disadvantaged Year 10 students. However, these programmes will do little to help the many students – especially younger students – who lack access to a suitable study space.

One important lesson here is that there is a role for national government. Individual schools face a choice between providing resources that students can access regardless of their home resources (for example, physical learning packs) or providing a wider range of resources that may better support students' learning but might not be accessible to all. This means they face a trade-off between preserving equal access to resources within their own student body and ensuring that their students do not fall behind those at other institutions. Coordinated national action can help to avoid some of these trade-offs.

Staggered return to school

The government has already indicated its plan to stagger when different year groups are able to attend school, starting with children in Reception, Year 1, Year 6 and Year 10. Choosing which cohorts to prioritise is challenging and depends on judgement calls about which groups of students are losing out most from learning at home and what implications school closures have for the wider economy.[8] There is a catch-22 for government here: it is very difficult to assess robustly which age groups are losing the most without gathering data from test scores.

However, the statistics in this report can help to shed some light on how different age groups are undertaking home learning. Students in primary and secondary school are spending similar amounts of time on home learning, though secondary school students are more likely to be receiving online classes.

However, these overall figures mask some differences among primary and secondary students. Time spent on home learning is more unequal among younger students; in primary schools, those in the highest-income fifth of families spend nearly 90 minutes more each day on home learning than their peers in the lowest-income fifth of households. Among secondary students, this difference is just over an hour. Inequalities in the resources that schools provide for home learning are substantial at all ages: there is a 17-percentage-point gap between the highest- and lowest-income families in provision of active learning resources among secondary school children, and a 12-percentage-point gap at primary school. This suggests a mixed picture on which ages are struggling more to access home learning, though further research is needed to determine whether older or younger children benefit more from the time that they are spending on home learning.

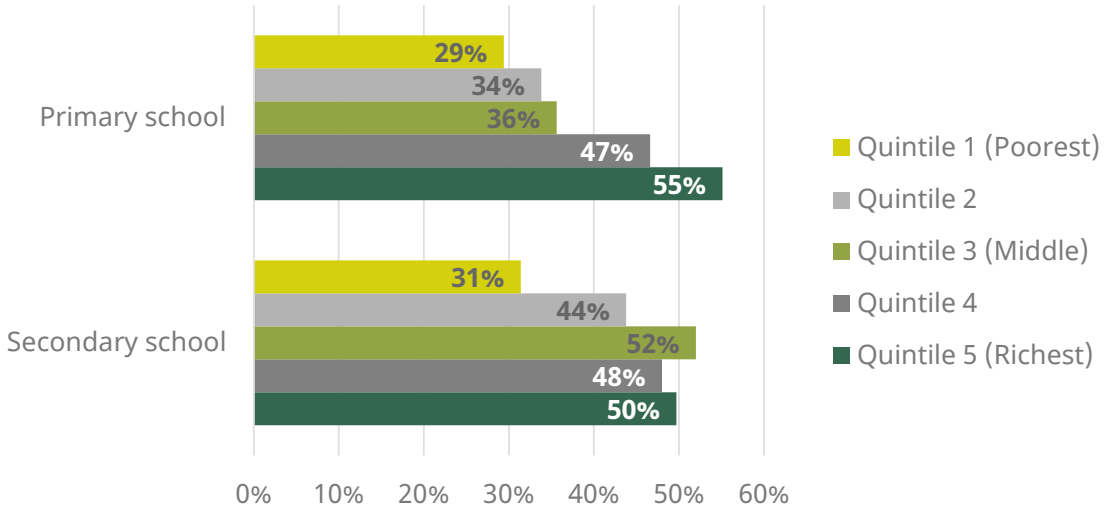
[8] Government could also choose to prioritise specific students within a cohort – for example, allowing the most disadvantaged students back to school first.

There is a special challenge for students in Year 10, who will sit their GCSEs next year. Year 10 pupils from poorer households will re-enter school having spent less time on learning activities during lockdown and with the time they have spent having been less productive because of a lesser access to resources. This will likely mean these pupils re-enter school having fallen behind their peers from more affluent homes. Their teachers and schools will then have very limited time – less than a year – to provide additional support to these pupils before they take their GCSEs, exams that can have lifelong consequences.[9]

A final consideration for policymakers will be the extent to which parents and children are willing to take up the opportunity to return to school. Home learning has undoubtedly disrupted children's and parents' lives. However, high-profile parents' groups in countries such as Denmark that have reopened schools suggest that many parents are unconvinced that a return to school will be safe for their child and their family.

We asked a subsample of our respondents whether they would send their child back to school if given the choice. Strikingly, overall fewer than half of parents – 39% of primary school parents and 45% of those whose child is in secondary school – were willing to send their child back to school at the time of the survey. Further information from the government on health risks and on how the return to school might look could increase these shares, as could 'peer pressure' from schools and other parents as children's classmates return, which was observed over several weeks prior to school closures. But Figure 8 is a stark warning to policymakers: do not assume that the return to school can be implemented as quickly, or as uniformly, as school closures were.

Figure 8. Share of parents who would send their child back to school if given the choice



Note: Parents were asked 'The government is thinking about how and when to reopen schools for different groups of children. If [child]'s school was open for them now, would you send them if you had a choice?'. Notes as for Figure 2.

Source: Authors' calculations using IFS–IoE survey of families' time use.

[9] See, for example, S. Machin, S. McNally and J. Ruiz-Valenzuela, 'Entry through the narrow door: the costs of just failing high-stakes exams', CESifo Working Paper 7008, 2018, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3198482.

Figure 8 also highlights a particular challenge for inequality. Over half of parents in the highest-income fifth of families are willing to send their children back to school, compared with under a third of the lowest-income parents. Our data do not allow us to unpick why there are such significant differences by income. There are many possible reasons – for example, there is mounting evidence that individuals in more disadvantaged groups are more likely to have been affected by COVID-19. Equally, lower-income workers are less likely to be able to work from home and so might not be juggling work and home learning commitments to the same extent. Parents in better-off families might feel more confident that their schools will manage children's return safely, or they might have different views on the importance of learning in the classroom rather than learning at home.

Whatever the reasons behind it, this strong relationship between income and willingness to return to school risks a situation where the children who are most able to cope with home learning return to school, leaving their more disadvantaged peers at home. If the children who are least able to access productive home learning remain at home, schools will also struggle to identify and provide additional support to the children who have fallen behind (since many of the same constraints to distance learning will still exist). The extent to which children overall, and those from different backgrounds in particular, will actually return once schools are reopened will have enormous importance for the design of policy in this area.

Appendix

We ensured that respondents with a wide variety of characteristics (gender, education, employment, geography) responded to the survey. However, as the survey was voluntary, we nevertheless see some important differences between the average characteristics of survey respondents and their households, and the average characteristics of parents in England as a whole.

To examine the extent of these differences, we constructed a sample of respondents from the nationally representative 2019 Labour Force Survey (LFS) who were roughly equivalent to our population of interest: parents with at least one child between the ages of 2 and 15.[10] Columns 1 and 2 of Table A1 show means for this nationally representative sample and for our sample. We see that our sample systematically contains more higher earners and more-educated individuals than does the LFS.

Therefore, so that our analysis is representative of the situation in England as a whole, we reweight our sample by key characteristics to ensure that it better matches the distribution of characteristics observed in the LFS. In particular, we reweight on: family structure, women's education, men's education, prior (pre-pandemic) employment, women's 2019 pre-tax earnings, men's 2019 pre-tax earnings and geographic region. To do this, we pool our data with the LFS sample and use regression analysis to calculate appropriate weights. We truncate our weights at the 10th and 90th percentiles to prevent our analysis being overly sensitive to a few observations.

Column 3 of the table shows means for the reweighted sample. We see that the average characteristics of this reweighted sample are now very similar to the nationally representative LFS sample.

[10] The LFS only has information on children's ages in groups, meaning that we were not able to select households with children of the exact ages that would make them eligible for our survey.

Table A1. Means for our survey sample (weighted and unweighted) compared with nationally representative LFS sample

	(1) Comparable LFS sample	(2) Our sample, unweighted	(3) Our sample, reweighted
Characteristics reweighted on			
Family structure			
Single mother	0.222	0.122	0.227
Single father	0.017	0.051	0.020
Couple	0.761	0.827	0.753
Women's education			
GCSEs or less	0.367	0.246	0.321
A levels	0.249	0.274	0.260
University degree	0.384	0.480	0.419
Men's education			
GCSEs or less	0.416	0.291	0.372
A levels	0.229	0.241	0.241
University degree	0.354	0.468	0.387
Prior employment			
Women's pre-crisis employment	0.745	0.731	0.756
Men's pre-crisis employment	0.935	0.880	0.919
Women's pre-crisis earnings			
£0–£9,999	0.476	0.294	0.450
£10,000–£24,999	0.285	0.426	0.300
£25,000–£39,999	0.151	0.134	0.150
£40,000+	0.089	0.145	0.100
Men's pre-crisis earnings			
£0–£9,999	0.131	0.089	0.146
£10,000–£24,999	0.206	0.333	0.204
£25,000–£39,999	0.301	0.258	0.305
£40,000–£59,999	0.188	0.167	0.190
£60,000+	0.174	0.153	0.155
Region			
Greater London	0.118	0.176	0.120
South East	0.235	0.145	0.215
South West	0.097	0.105	0.106
West Midlands	0.107	0.113	0.105
North West	0.136	0.143	0.140
North East	0.061	0.073	0.064
Yorkshire and the Humber	0.113	0.098	0.105
East Midlands	0.092	0.076	0.093
East of England	0.041	0.071	0.051
Characteristics not reweighted on			
Education			
Neither partner university	0.470	0.388	0.461
One partner university	0.265	0.258	0.257
Both partners university	0.265	0.354	0.282
Employment			
Neither partner employed	0.028	0.061	0.036
One partner employed	0.235	0.270	0.261
Both partners employed	0.737	0.670	0.703